

2. Product Specifications

2.1 Product Overview

Item	Descriptions	Remark
Basic Model	ML-1610	
Series Model	ML-1615P	
Market of Sales	Personal user Laser printer.(Low Price for small work Group.)	
Specification	· 16ppm(Ltr. 17ppm), Jupiter 4e 150MHz, 2Mbytes SDRAM · 1K(initial), 2K(sales) · USB 1.1 Model(Compatible with USB 2.0), IEEE 1284 Parallel(ML-1615P) · 150pages feeding, 50pages Face Down	

2.2 Specifications

- Product Specifications are subject to change without notice. See below for product specifications.

2.2.1 General Specifications

Item	Descriptions
Print Method	Electro-photographic Printing
Developing system	Non-Magnetic, Mono-Component Developing System
Print Speed	16 PPM : A4 size 17 PPM (Letter size)
Resolution	True 600 X 600 DPI
Source of Light	Laser diode (LSU : Laser Scanning Unit)
Warm-Up Time	Cold Warm-up : 30sec, Sleep mode : 30 sec
First Print Time	Less than 10 seconds (Ready to 1st page out)
Feed Method	Cassette & Manual
Media Size	76 X 128mm (3 x 5") to 216 X 356mm (8.5 X 14")
Paper thickness	Cassette : 16 ~28 lb , Manual Feeder : 16 ~ 43 lb
Size(W X D X H)	358*299*217 mm
Weight	Net : 4.8Kg(30.6lb) with toner cartridge Gross : 7.65Kg(37.7lb)
Acoustic Noise	Stand by : Less than 35 dB Printing : Less than 50 dB
Power save mode	Yes
Toner save mode	Yes
Machine Life	50,000pages

Item	Descriptions	
Periodic Replacing Parts ※Same with Machine Life	Pick Up Roller : 50,000 Pages	
	Transfer Roller : 50,000 Pages	
	Fuser Assembly : 50,000 Pages	
	Toner Sensor	No
	Toner Type	Non-Magnetic Contact System
Cassette	Toner Initial	1,000 sheets@ISO 19752 Standard coverage
	Toner sale	2,000 sheets@ISO 19752 Standard coverage
	- Paper capacity : 150sheets	
	- Paper weight : 60 ~ 163 g/ m ² / 16 ~ 43 lbs	

2.2.2 Controller

Item	Descriptions
Processor(CPU)	Jupiter 4e 150MHz
Memory	Standard/Max. : 2MB(Max. 2 MB)
	Type : SDRAM
	Expand Memory Slot, Type : NO
	Compression Technology : MET(Memory Enhancement Technology)
(Emulation)	Standard : SPL
	Auto Emulation Sensing : YES
(Interface)	Standard : USB 1.1 Only(Compatible with USB 2.0)
	Option : NO
	Auto Interface Sensing : YES
Font	Type : Windows Fonts
	Number : NO
Test Print	Demo Mode : Press the Demo Key for 2 Seconds
	Configuration Mode : Press the Demo Key for 2 Seconds
	Cleaning Mode : Not Support
	Service Mode : Press the Demo Key when Power on(F/W Download)

※ ML-1615P model : I/O Support(USB 1.1 + IEEE 1284 Parallel port)

2.2.3 Electrical Specification

Item	Descriptions		Remark
Input Voltage	Nominal input voltage	220~240 VAC	
	Input voltage range	198~255 VAC	
	Nominal frequency	50/60 MHz	
	Frequency tolerance	+3Hz	
Power Consumption	Printing : 300W Avg(Max. 500W)		
	Idling : 100W Avg or less		
	Power Save : 10W Avg or less		

2.2.4 Environmental Range

Item	Operating	Storage
Temperature	10~30 oC(50-90 oF)	-20~40 oC (-4~104 oF)
Humidity	20~80%RH	10~80%RH

2.2.5 Toner Cartridge

Item	Descriptions	Remark
Life span	Starter: 1,000 Pages(initial)	A4 Size, ISO 19752 Pattern Standard Coverage SIMPLEX
	Running : 2,000 Pages(sales)	
Developing Method	Non-magnetic Contact Developing	
Charging Method	Conductive Roller Charging	
Toner Empty sensor	No	
Ozone	0.1PPM or less	
Cartridge Style	Single cartridge	

2.2.6 Paper Handling Specifications

Please refer to "Paper Specifications" on user Guide.

2.2.6.1 Input Paper Size

Paper	paper size	Cassette
A4	210 X 297 mm	O
Letter	216 X 279(8.5 X 11")	O
US Folio(Legal13")	216 X 330(8.5 X 13")	O
Legal(Legal14")	216 X 356(8.5 X14")	O
Executive	184 X 267((7.25 X10.5")	O
Statement	140 X 216(5.5 x8.5")	
ISO B5	176 X 250	O
JIS B5	182 X257	O
A5	148 X 210	O
A6	105 X148	O
No.10 Env.	105 X 241(4.15 X 9.5")	O(1 sheet)
Monarch Env.	98 X191(3.87 X 7.5")	O(1 sheet)
DL Env.	110 X 220(4.33 X 8.66")	O(1 sheet)
C5 Env.	162 X 229(6.38 X 9.01")	O(1 sheet)
C6 Env.	114 X 162(4.49 X 6.38")	O(1 sheet)
Transparency(OHP)	A4 or Letter	O(1 sheet)
Label paper	A4 or Letter	O(1 sheet)

2.2.6.2 Input capacity

Item	Descriptions
Cassette	150 sheets

2.2.6.3 Output capacity

Face Down	50 sheets
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2.3 Model Comparison Table

Model Name	ML-1610	ML-1615P	ML-1750
General			
Company	Samsung	Samsung	Samsung
Printing Process			
Print Method:	Electrophotographic Laser	Electrophotographic Laser	Electrophotographic laser
Print Speed	Up to 16ppm in A4, Up to 17ppm in letter	Up to 16ppm in A4, Up to 17ppm in letter	Up to 16ppm(A4) (ML-1510 : 14ppm)
FPOT	10sec	10sec	12sec
Resolution	600*600	600*600	600*600
Duty Cycle, Monthly	up to 5000 prints per month	up to 5000 prints per month	up to 15,000 prints per month
Hardware Software			
Processor Type	Samsung 150MHz	Samsung 150MHz	66MHz RISC(Jupiter3)
Memory	2MB(2MB)	8MB SDRAM(8MB)	8MB SDRAM(2MB)
OS	Win9X/ME/2000/XP/Linux7/Mac OS8.6 ~ 10.3	Win9X/ME/2000/XP/Linux7/Mac OS8.6 ~ 10.3	Win9X/ME/2000/XP/Linux7/Mac OS8.6 이상
Standard Emulations	SPL	SPL	GDI(SPL)
Interface Support			
Standard Interfaces	USB 1.1(Compatible with USB 2.0) Cable Not Supply(KOR,CHINA is Supply)	USB 1.1 IEEE 1284 Parallel	USB 1.1 Cable Not Supply
Optional Interfaces	N/A	N/A	N/A
Paper Handling			
Standard Paper Input	150 Sheets Multi-purpose Tray	150 Sheets Multi-purpose Tray	250 Sheets Multi-Purpose Cassette, Single Sheets Adjustable Manual Feed
Paper Output	Face down : 50 Sheet(TBD)	Face down : 50 Sheet(TBD)	50 Sheet Face Down Tray
Duplexing	Manual	Manual	
Paper Weight :			
- Plain paper	16 to 24 lb. Bond(60 to 90g/m ²)	16 to 24 lb. Bond(60 to 90g/m ²)	16 to 24 lb. Bond(60 to 90g/m ²)
- Thick stock	24 - 90 lb. Index(163g/m ²)	24 - 90 lb. Index(163g/m ²)	24 - 90 lb. Index(163g/m ²)
Physical			
Type	Laser Printer with Internal Controller	Laser Printer with Internal Controller	Laser Printer with Internal Controller
Dimensions w/output tray extended(WxDxH)	358mm x 299mm x 217mm	358mm x 299mm x 217mm	352mm x 372mm x 196mm
Weight(without shipping)	5.75kg	5.5kg	7.05kg(manual book : 7kg)
Carton Dimensions (WxDxH)	455mm x 415mm x 325mm	455mm x 415mm x 325mm	508mm x 425mm x 265mm
Weight(as shipped)	7.65kg	7.65kg	9kg
Electical			
Power Requirements			
Power Consumption	Power Consumption 300W printing, 10W Down Sleep Mode	Power Consumption 300W printing, 10W Down Sleep Mode	Power Consumption 330W printing, 10W Down Sleep Mode
Energy Star* Compliant	Yes	Yes	Yes
Environmental			
Temperature :			
- Operating	10℃ to 32℃	10℃ to 32℃	10℃ to 32℃
- Non-Operating	0℃ to 40℃	0℃ to 40℃	0℃ to 40℃
Humidity :			
- Operating	: 20% to 80% RH	: 20% to 80% RH	: 20% to 80% RH
- Non-Operating	: 20% to 80% RH	: 20% to 80% RH	: 20% to 80% RH
Noise Level :			
Operating	Operating : <50dB(A), Standby : <35 dB(A)	Operating : <50dB(A), Standby : <35 dB(A)	Operating : <52dB(A), Standby : <35 dB(A)
Consumables			
Starter	up to 1,000 pages(A4/Letter) at ISO 5% coverage continuous printing.	up to 1,000 pages(A4/Letter) at ISO 5% coverage continuous printing.	up to 1,000 pages(A4/Letter) at ISO 5% coverage continuous printing.
Replacement	up to 2,000 pages(A4/Letter) at ISO 5% coverage	up to 2,000 pages(A4/Letter) at ISO 5% coverage	up to 3,000 pages(A4/Letter) at ISO 5% coverage

UNIT	Part	Skylark		* Snipe	Note
		ML-1610	* ML-1615	* ML-2010	
Controller	CPU	Jupiter4e(150Mhz)	←	←	▶ Provide built-in Flash Memory(0.5Mb) and LD control bloc, ▶ Based on ARM 940T Core ▶ EPROM
	Memory	2Mbyte	8Mbyte	8Mbyte	▶ Design CAD location to install arbitrarily 2Mbyte or 8Mbyte SDRAM on the PCB.
	PC Interface	USB1.1	Parallel+USB1.1	USB1.1	▶ ML-1615 for CIS
	Motor Drv IC	AN3977	←	←	▶ Skylark/Snipe use the same Motor driver IC.
	PCB	90*90mm, FR4, 2L	90*122.75mm, FR4, 4L	90*90mm, FR4, 2L	▶ Skylark/Snipe use the same PBA. ▶ Installing Chips to both PCB sides
Power	SMPS	+5V(0.8A) +24V(1.5A)	←	+5V(0.8A) +24V(2.0A)	▶ Snipe/Whitney use the same SMPS.
	HVPS	THV(+), MHV, Supply, OPC, DEVE, THV(-)	←	←	▶ Refer to Power Specification
Panel	-	Dual LED/Single LED, Tact S/W	←	←	▶ Need not Panel PCB due to HVPS built-in Panel functions

*. These model are as yet undeveloped.